

AMENDMENTS TO THE CLAIMS

91 1. (Currently Amended) A method for delivering media objects across a communication network comprising multiple edge server computers controllably connected to at least one client computers and at least one origin server computer, the method comprising the steps of:

storing said media object on said origin server computer;

storing a prefix on at least one edge server computer, said prefix comprising a beginning portion of said media object, and a size of the prefix is determined, at least in part, by anticipated demand for said media object;

transmitting said prefix from said edge server computer to said at least one client computer;

~~transmitting said media object from said origin server computer to said edge computers in response to said transmitting of said prefix to said client computers; and~~

transmitting to said at least one client computers said media object subsequent to said prefix such that transmission of said prefix and said media object is delivered to said at least one client computers without interruption.

2. (Original) The method of Claim 1, wherein said media object is transmitted from said origin server computer to said edge server computer in parallel.

3. (Original) The method of Claim 1, wherein said prefix is distributed to said edge server computer based on anticipated demand.

4. (Original) The method of Claim 1, wherein said prefix is distributed to said edge server computer based on measured usage.

5. (Original) The method of Claim 1, wherein said prefix is distributed to said edge server computer based on a connection between said origin server computer and said edge server computer.

6. (Original) The method of Claim 1, wherein said media object is referenced by a URL.

7. (Original) The method of Claim 6, wherein said user requests delivery of said media object by selecting said URL.

8. (Currently Amended) A method of streaming media objects over a computer network to a user, the network having at least one origin server and at least one edge server, the method comprising the steps of:

receiving a user request for deliver of a media object;

if the media object is fully stored on the edge server, then streaming the media object to the user;

if the media object is partially stored on the edge server, then streaming a prefix of the media object to the user while simultaneously fetching the suffix of the media object from the origin server, then streaming the suffix such that no interruption in streaming occurs between streaming the prefix and streaming the suffix; and

91 if the media object is not stored on the edge server, fetching a sufficient portion of the media object, reserving sufficient network bandwidth on a connection between the edge server and the origin server, then begin streaming the sufficient portion while the remaining portion of the media object is fetched, and streaming the remaining portion after the sufficient portion has been streamed such that no interruption in streaming occurs between streaming the sufficient portion and streaming the remaining portion.

9. (Currently Amended) A computer program product for delivering media objects across a communication network comprising multiple edge server computers controllably connected to client computers and at least one origin server computer, said computer program product, when executed on a computer, performing the steps of:

storing said media object on said origin server computer;

transmitting a prefix of said media object to said at least one edge server computer, said prefix containing a beginning portion of said media object, and a size of the prefix is determined, at least in part, by anticipated demand for said media object;

receiving a delivery request from said edge server computer for transmission of the remaining portion of said media object associated with said prefix; and

transmitting said remaining portion to said edge server computer in response to said delivery request, said remaining portion delivered subsequent to said prefix without interruption or delay.

10. (Currently Amended) A computer program product for delivering media objects across a communication network comprising multiple edge server computers controllably connected to client computers and at least one origin server computer, the computer program product, when executed on a computer, performing the steps of:

storing a prefix, said prefix comprising a beginning portion of said media object, and a size of the prefix is determined, at least in part, by anticipated demand for said media object;

receiving a request from said client computer for delivery of said media object;

transmitting said prefix to said client computer in response to said delivery request;

receiving remaining portion of said media object associated with said prefix; and

transmit said media object to said client computer such that delivery of the prefix is followed by delivery of the media object without interruption or delay.

11. (Currently Amended) A computer program product for streaming media objects over a computer network to a user, the network having at least one origin server and at least one edge server, the computer program product, when executed on a computer, performing the steps of:

receiving a user request for deliver of a media object;

if the media object is fully stored on the edge server, then streaming the media object to the user;

if the media object is partially stored on the edge server, then streaming a prefix of the media object to the user while simultaneously fetching the suffix of the media object from the origin server, then streaming the suffix such that no interruption in streaming occurs between streaming the prefix and streaming the suffix; and

if the media object is not stored on the edge server, fetching a sufficient portion of the media object, reserving sufficient network bandwidth on a connection between the edge server and the origin server, then begin streaming the sufficient portion while the remaining portion of the media object is fetched, and streaming the remaining portion after the sufficient portion has been streamed such that no interruption in streaming occurs between streaming the sufficient portion and streaming the remaining portion.

12. (Currently Amended) A computer system for delivering media objects to a client computer, said computer system comprising:

at least one origin server computer, said origin server computer storing at least one media object;

at least one edge server computer, said edge server computer storing a prefix of said media object, said prefix containing a beginning portion of said media object, said edge server computer in communication with said origin server computer, said client computer issuing to said edge server computer a request for delivery of said media object, and a size of the prefix is determined, at least in part, by anticipated demand for said media object; said origin computer transmitting said media object associated with said first portion to said edge server computer, said edge server computer subsequently transmitting said media object associated with said first portion to said client computer such that delivery of the first portion and said subsequently transmitted media object is continuous and uninterrupted.

13. (Original) The computer system of Claim 12, wherein said origin server computer contains said media object in multiple file formats.

14. (Original) The computer system of Claim 12, further including a media streaming module.

15. (Original) The computer system of Claim 12, further including a media management module.

16. (Original) The computer system of Claim 12, further including a media distribution module.

17. (Original) The computer system of Claim 14, wherein said media streaming module, media management module, and media distribution module are included in said origin server computer.

18. (Original) The computer system of Claim 17, wherein said media streaming module, media management module, and media distribution module are included in said edge server computer.

91 19. (New) A method according to Claim 1, further comprising:  
reserving an amount of bandwidth on a connection between the origin server and the edge server, the amount of bandwidth sufficient to allow transfer of said media object to said edge server such that the media object is viewed by the client computer without interruption.

20. (New) A method according to Claim 1, further comprising:  
reserving an amount of disk bandwidth on a device storing the media object, the amount of disk bandwidth sufficient to allow transfer of said media object to said edge server such that the media object is received by the client computer without interruption.

21. (New) A method according to Claim 8, further comprising:  
reserving an amount of disk bandwidth on a device storing the media object, the amount of disk bandwidth sufficient to allow constant streaming of the media object.

22. (New) A method for streaming a media object stored at an origin server from an edge server at a bit rate, the method comprising:  
determining a size of a prefix stored on the edge server;  
determining a necessary transfer rate, based on the size of the prefix, for streaming at the bit rate;  
reserving bandwidth between the origin server and the edge server to achieve the necessary transfer rate.

23. (New) A method according to claim 22 wherein the media object is stored on a disk, further comprising:  
reserving disk bandwidth on the disk to achieve the necessary transfer rate.

24. (New) A method according to Claim 22, wherein the necessary transfer rate is greater than a threshold rate, the method further comprising:  
increasing the size of the prefix based on the necessary transfer rate and re-calculating the necessary transfer rate based on the increased size of the prefix.

25. (New) A method according to claim 22, wherein the media object comprises an audio and video movie media object.

26. (New) A method according to claim 8, wherein the media object comprises a video movie media object.

27. (New) A computer program product according to claim 9, wherein the media object comprises a video movie media object.

28. (New) A computer system according to claim 12, wherein the media object comprises a video movie media object.

91 29. (New) A computer program product according to claim 11, wherein the amount of network bandwidth is sufficient to allow transfer of said media object to said edge server such that the media object is viewed by the client computer without interruption.

30. (New) A method for streaming a media object stored on a storage device from a first server to a second server, the media object having a minimum playback rate, the method comprising:  
reserving an amount of network bandwidth between the first and second servers;  
reserving an amount of disk bandwidth on the storage device;  
storing a prefix comprising a portion of the media object at the edge server;  
initiating playback of the prefix and transferring a remaining portion of the media object to the edge server if the prefix is large enough to playback the media object at the minimum playback rate using the amount of network bandwidth and the amount of disk bandwidth.

31. (New) A method according to claim 30, further comprising increasing a size of the prefix if the prefix is not large enough to playback the media object at the minimum playback rate using the amount of network bandwidth and the amount of disk bandwidth.

32. (New) A method according to claim 30, wherein a size of the prefix is determined by the amount of network bandwidth and the amount of disk bandwidth.

33. (New) A method according to claim 30, wherein the act of reserving the amount of network bandwidth comprises reserving the amount of network bandwidth for a duration of playback of the media object.

34. (New) A method according to claim 30, wherein the act of reserving the amount of disk bandwidth comprises reserving the amount of disk bandwidth for a duration of playback of the media object.

35. (New) A method according to claim 30, wherein the amount of network bandwidth, the amount of disk bandwidth, and a size of the prefix are determined to ensure playback of the media object at the minimum playback rate and balance system resources.

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36. (New) A method according to claim 30, wherein the media object is at least a portion of a video.

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